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Sequence Listing was accepted.

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Reviewer: Anne Corrigan

Timestamp: [year=2008; month=4; day=23; hr=11; min=58; sec=56; ms=319;]

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Application No: 10782375 Version No: 1.0

Input Set:

Output Set:

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Finished: 2008-04-03 20:04:45.635
Elapsed: 0 hr(s) 0 min(s) 0 sec(s) 657 ms
Total Warnings: 5
Total Errors: 0
No. of SeqIDs Defined: 15
Actual SeqID Count: 15

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SEQUENCE LISTING

<110> Pulst, Stefan M.
Huynh, Duong P.

<120> Parkin Interacting Polypeptides and
Methods of Use

<130> 66783-145

<140> 10782375
<141> 2008-04-03

<150> 60/448,252
<151> 2003-02-18

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caccaaggat gatgttctta gcgatctcca cgcgcaggcc cgcgcaggct gataccagga 240
cactggatgt ctggagccgc ttcattgcct c atg gcc caa cac ata cag ctg 292
Met Ala Gln His Ile Gln Leu
1 5

ccg gga gta aag gcc ctc gtc tat gtc tgc ttc act gcc gtt ctt ggc 340
Pro Gly Val Lys Ala Leu Val Tyr Val Cys Phe Thr Ala Val Leu Gly
10 15 20

cat tcc gtt ggt tgg cac cga ggg cac ttc gga caa cac gga ctg ggc 388
His Ser Val Gly Trp His Arg Gly His Phe Gly Gln His Gly Leu Gly
25 30 35

agg gga gca gtt aga acc cgg ctt tgg atc agg ccc gga cac gcg acg 436
Arg Gly Ala Val Arg Thr Arg Leu Trp Ile Arg Pro Gly His Ala Thr
40 45 50 55

ttt ctt gga cag cgg cga gct gga cat caa tgc cgg ttc ccc ggg tcg 484

| | | | | | | | | | | | | | | | | |
|--|-------------|-------------|------------|------------|-------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|
| Phe | Leu | Gly | Gln | Arg | Arg | Ala | Gly | His | Gln | Cys | Arg | Phe | Pro | Gly | Ser | |
| 60 | | | | | | | | | 65 | | | | 70 | | | |
| cgc cgc cgc caa ctc ctc aag gag ccg aag cca agc ccg gcc gca ccc | | | | | | | | | | | | | | | 532 | |
| Arg | Arg | Arg | Gln | Leu | Leu | Lys | Glu | Pro | Lys | Pro | Ser | Pro | Ala | Ala | Pro | |
| 75 | | | | | | | | | 80 | | | | 85 | | | |
| tcc tcc ttc tcc tcc ccg ccg cct ggg ccg cct aga atc gcc gct | | | | | | | | | | | | | | | 580 | |
| Ser | Ser | Phe | Ser | Ser | Pro | Pro | Pro | Gly | Pro | Pro | Arg | Ile | Ala | Ala | | |
| 90 | | | | | | | | | 95 | | | | 100 | | | |
| gcc gcc ttc tcc tcc ccc ggc cgt tgt ggt tgt tgt ccc tgc cac | | | | | | | | | | | | | | | 628 | |
| Ala | Ala | Phe | Ser | Ser | Pro | Gly | Arg | Cys | Gly | Cys | Gly | Cys | Pro | Cys | His | |
| 105 | | | | | | | | | 110 | | | | 115 | | | |
| ctc ctt aca gcc gag ccg ccg aca caa gat ggc gga cgc ttg agc ctg | | | | | | | | | | | | | | | 676 | |
| Leu | Leu | Thr | Ala | Glu | Pro | Pro | Thr | Gln | Asp | Gly | Gly | Arg | Leu | Ser | Leu | |
| 120 | | | | | | | | | 125 | | | | 130 | | | 135 |
| ggg ccg gaa caa aac ctt ggg ccc cac ccc cag aaa ccc gga tgc aag | | | | | | | | | | | | | | | 724 | |
| Gly | Pro | Glu | Gln | Asn | Leu | Gly | Pro | His | Pro | Gln | Lys | Pro | Gly | Cys | Lys | |
| 140 | | | | | | | | | 145 | | | | 150 | | | |
| cgg gcc gcg cct act tat gaa tca tgc ata aag ttc cct act cgg ttg | | | | | | | | | | | | | | | 772 | |
| Arg | Ala | Ala | Pro | Thr | Tyr | Glu | Ser | Cys | Ile | Lys | Phe | Pro | Thr | Arg | Leu | |
| 155 | | | | | | | | | 160 | | | | 165 | | | |
| cga ttc att cgg tta gaa gtg gaa cag cac cac ctg gtg gac att gtg | | | | | | | | | | | | | | | 820 | |
| Arg | Phe | Ile | Arg | Leu | Glu | Val | Gln | His | His | Leu | Val | Asp | Ile | Val | | |
| 170 | | | | | | | | | 175 | | | | 180 | | | |
| gca gta aca acg aaa aca ggt aaa aca gag gcc acg cct cat gga atg | | | | | | | | | | | | | | | 868 | |
| Ala | Val | Thr | Thr | Lys | Thr | Gly | Lys | Thr | Glu | Ala | Thr | Pro | His | Gly | Met | |
| 185 | | | | | | | | | 190 | | | | 195 | | | |
| cga cta atg aat gaa ttg ttg cag cca ggc tgt caa gga agc gaa gaa | | | | | | | | | | | | | | | 916 | |
| Arg | Leu | Met | Asn | Glu | Leu | Leu | Gln | Pro | Gly | Cys | Gln | Gly | Ser | Glu | Glu | |
| 200 | | | | | | | | | 205 | | | | 210 | | | 215 |
| aaa ccg tta agg cca tgc ttc ctg att ata agt tat gca tgaagtttag | | | | | | | | | | | | | | | 965 | |
| Lys | Pro | Leu | Arg | Pro | Cys | Phe | Leu | Ile | Ile | Ser | Tyr | Ala | | | | |
| 220 | | | | | | | | | 225 | | | | | | | |
| tggttggtag caacaaccag caaccagaaa gcagatgtta aaacatggaa gcccacacacc | | | | | | | | | | | | | | | 1025 | |
| cccattcatg | aatnaatgat | gatcttgca | ggggcccgaa | gccaaggaga | cccaggccac | | | | | | | | | | | 1085 |
| aacttacttc | atgaaataatg | catgaggccc | agtgggttgg | aataaaaggg | gcacgcccc | | | | | | | | | | | 1145 |
| ctattgctgc | atctaataca | ctgttaagcag | ggaaatgggg | ctgctgcagg | gaaaacacac | | | | | | | | | | | 1205 |
| tctcccgagt | cctgaataat | gaattatgct | gctgcagtag | ctcaacctgg | aaactcagag | | | | | | | | | | | 1265 |
| aggtaagaa | aggttccacc | caatttatga | attatgcata | aggcgaagaa | acacccaaga | | | | | | | | | | | 1325 |
| ctgcccgtcc | cctcatttac | ataaatatta | tactagcatt | taccatctca | cttcttaggaa | | | | | | | | | | | 1385 |
| tactagtata | tcgctcacac | ctcatatcct | ccctactatg | cctagaagga | ataatactat | | | | | | | | | | | 1445 |
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 35 40 45

Ile Arg Pro Gly His Ala Thr Phe Leu Gly Gln Arg Arg Ala Gly His
 50 55 60

Gln Cys Arg Phe Pro Gly Ser Arg Arg Arg Gln Leu Leu Lys Glu Pro
 65 70 75 80

Lys Pro Ser Pro Ala Ala Pro Ser Ser Phe Ser Ser Ser Pro Pro Pro
 85 90 95

Gly Pro Pro Arg Ile Ala Ala Ala Phe Ser Ser Pro Gly Arg Cys
 100 105 110

Gly Cys Gly Cys Pro Cys His Leu Leu Thr Ala Glu Pro Pro Thr Gln
 115 120 125

Asp Gly Gly Arg Leu Ser Leu Gly Pro Glu Gln Asn Leu Gly Pro His
 130 135 140

Pro Gln Lys Pro Gly Cys Lys Arg Ala Ala Pro Thr Tyr Glu Ser Cys
 145 150 155 160

Ile Lys Phe Pro Thr Arg Leu Arg Phe Ile Arg Leu Glu Val Glu Gln
 165 170 175

His His Leu Val Asp Ile Val Ala Val Thr Thr Lys Thr Gly Lys Thr
 180 185 190

Glu Ala Thr Pro His Gly Met Arg Leu Met Asn Glu Leu Leu Gln Pro
 195 200 205

Gly Cys Gln Gly Ser Glu Glu Lys Pro Leu Arg Pro Cys Phe Leu Ile
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Ile Ser Tyr Ala
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| gttcttggcc attccgttgg | ttggcaccga gggcacttcg | gacaacacgg actggggcagg | 120 |
| ggagcagtttta | gaaccggctt | ttggatcagg cccggacacg | 180 |
| cgagctggac atcaatgccc | gttccccggg | tcgcgcgcgc | 240 |
| aagccaaagcc cggccgcacc | tcctccccc | gccaactctt | 300 |
| atcgcccgctg ccgccttctc | ctccccccggc | caaggagccg | 360 |
| cttacagccg agccggccgac | acaagatggc | ggacgcgttga | 420 |
| cttggggccc accccagaa | accggatgc | gcctggggcc | 480 |
| ataaaatgtcc ctactcggtt | ggattcatt | ggaacagca | 540 |
| gacattgtgg cagtaacaac | gaaaacaggt | ccacgcctca | 600 |
| ctaatgaatg aattgttgca | accggctgt | tggaaatgcga | 660 |
| tgcttcctga ttataagtta | tgca | | 684 |

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acagccgagc cgccgacaca agatggcgga cgctgagcct gggccggaa caaaacctt 180
ggccccaccc ccagaaaccc ggatgcaagc gggccgcgc tacttatgaa tcatgcataa 240
atgtccctac tcgggtgcga ttcatcggt tagaagtggaa acagcaccac ctggtgac 300
ttgtggcagt aacaacgaaa acaggtnaaa cagaagccac gcctcatgaa atgcgactaa 360
tgaatgaatt gttcagcca ggctgtcaag gaagcgaaaa aaaaaccgtt aaggccatgc 420
ttccctgatta taagttatgc atgaagttga gtgggtggta gacttaacaa ccagcaacca 480
gaaagcagat gttaaaacat ggaagccaca cacccttatt catgaataat gatgatctt 540
caggggcccg gaagccaagg agacccaggc cacaacttac ttcatgata atgcgtgagg 600
cccagtgggt tggataaaaa ggggcacgcgc cgcctattgc tgcatctaat acactgtaa 660
cagggaaatg gggctgctgc agggaaaaca cactcttca ggtctgaat aatgaattat 720
gctgctgcaag tagctcaacc tggaaactca gagaggtaa gaaagggttcc acccaattta 780
tgaattatgc ataaggcgaa gaaacaccca agactgcctt gccccttatt tacataaata 840
ttatacttagc attaccatc tcacttcttag gaataactagt atatcgctca cacctcatat 900
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gaagactgct catttgtcta ctgccttatt cctggaaatt gcaactggaa tggctgtatta 180
agaaaaacacag aataattctg aaagaaaagaa aacaaagaaa aacataactcc agaattccta 240
atagaacact tcacctgaac ctaaa atg gtg agc gag agt cac cat gag gcc 292
Met Val Ser Glu Ser His His Glu Ala
1 5

ctg gca gcc ccg cct gtc acc act gtc gcg act gtt ctg cca agc aat 340
Leu Ala Ala Pro Pro Val Thr Thr Val Ala Thr Val Leu Pro Ser Asn
10 15 20 25

gcc aca gag cca gcc agt cct gga gaa gga aag gaa gat gca ttt tct 388
Ala Thr Glu Pro Ala Ser Pro Gly Glu Gly Lys Glu Asp Ala Phe Ser
30 35 40

aag ctg aag gag aag ttt atg aat gag ttg cat aaa att cca ttg cca 436
Lys Leu Lys Glu Lys Phe Met Asn Glu Leu His Lys Ile Pro Leu Pro
45 50 55

ccg tgg gcc tta att gca ata gcc ata gtc gca gtc ctt tta gtc ctg 484
Pro Trp Ala Leu Ile Ala Ile Ala Ile Val Ala Val Leu Leu Val Leu
60 65 70

| | | | | |
|---|-----|-----|-----|------|
| acc tgc tgc ttt tgt atc tgt aag aaa tgt ttg ttc aaa aag aaa aac | 75 | 80 | 85 | 532 |
| Thr Cys Cys Phe Cys Ile Cys Lys Lys Cys Leu Phe Lys Lys Lys Asn | | | | |
| aag aag aag gga aag gaa aaa gga ggg aag aat gcc att aac atg aaa | 90 | 95 | 100 | 580 |
| Lys Lys Lys Gly Lys Glu Lys Gly Lys Asn Ala Ile Asn Met Lys | | | | |
| gat gta aaa gac tta ggg aag acg atg aaa gat cag gcc ctc aag gat | 110 | 115 | 120 | 628 |
| Asp Val Lys Asp Leu Gly Lys Thr Met Lys Asp Gln Ala Leu Lys Asp | | | | |
| gat gat gct gaa act gga ttg aca gat gga gaa gaa aaa gaa gaa ccc | 125 | 130 | 135 | 676 |
| Asp Asp Ala Glu Thr Gly Leu Thr Asp Gly Glu Glu Lys Glu Glu Pro | | | | |
| aaa gaa gag gag aaa ctg gga aaa ctt cag tat tca ctg gat tat gat | 140 | 145 | 150 | 724 |
| Lys Glu Glu Lys Leu Gly Lys Leu Gln Tyr Ser Leu Asp Tyr Asp | | | | |
| ttc caa aat aac cag ctg ctg gta ggg atc att cag gct gcc gaa ctg | 155 | 160 | 165 | 772 |
| Phe Gln Asn Asn Gln Leu Leu Val Gly Ile Ile Gln Ala Ala Glu Leu | | | | |
| ccc gcc ttg gac atg ggg ggc aca tct gat cct tac gtg aaa gtg ttt | 170 | 175 | 180 | 820 |
| Pro Ala Leu Asp Met Gly Gly Thr Ser Asp Pro Tyr Val Lys Val Phe | | | | |
| ctg cta cct gat aag aag aaa ttt gag aca aaa gtc cac cga aaa | 190 | 195 | 200 | 868 |
| Leu Leu Pro Asp Lys Lys Lys Phe Glu Thr Lys Val His Arg Lys | | | | |
| acc ctt aat cct gtc ttc aat gag caa ttt act ttc aag gta cca tac | 205 | 210 | 215 | 916 |
| Thr Leu Asn Pro Val Phe Asn Glu Gln Phe Thr Phe Lys Val Pro Tyr | | | | |
| tcg gaa ttg ggt ggc aaa acc cta gtg atg gct gta tat gat ttt gat | 220 | 225 | 230 | 964 |
| Ser Glu Leu Gly Lys Thr Leu Val Met Ala Val Tyr Asp Phe Asp | | | | |
| cgt ttc tct aag cat gac atc att gga gaa ttt aaa gtc cct atg aac | 235 | 240 | 245 | 1012 |
| Arg Phe Ser Lys His Asp Ile Ile Gly Glu Phe Lys Val Pro Met Asn | | | | |
| aca gtg gat ttt ggc cat gta act gag gaa tgg cgt gac ctg caa agt | 250 | 255 | 260 | 1060 |
| Thr Val Asp Phe Gly His Val Thr Glu Glu Trp Arg Asp Leu Gln Ser | | | | |
| gct gag aag gaa gag caa gag aaa ttg ggt gat atc tgc ttc tcc ctt | 270 | 275 | 280 | 1108 |
| Ala Glu Lys Glu Glu Gln Glu Lys Leu Gly Asp Ile Cys Phe Ser Leu | | | | |
| cgc tac gta cct act gct ggt aag ctg act gtt gtc att ctg gag gca | 285 | 290 | 295 | 1156 |
| Arg Tyr Val Pro Thr Ala Gly Lys Leu Thr Val Val Ile Leu Glu Ala | | | | |
| aag aac ctg aag aag atg gat gtg ggt ggc tta tcc gat cct tat gtg | | | | 1204 |

| | | | |
|--|-----|-----|------|
| Lys Asn Leu Lys Lys Met Asp Val Gly Gly Leu Ser Asp Pro Tyr Val | | | |
| 300 | 305 | 310 | |
| aag att cat ctg atg cag aat ggt aag agg ctg aag aag aaa aag aca | | | 1252 |
| Lys Ile His Leu Met Gln Asn Gly Lys Arg Leu Lys Lys Lys Thr | | | |
| 315 | 320 | 325 | |
| aca att aaa aag aac aca ctt aac ccc tac tac aat gag tca ttc agc | | | 1300 |
| Thr Ile Lys Lys Asn Thr Leu Asn Pro Tyr Tyr Asn Glu Ser Phe Ser | | | |
| 330 | 335 | 340 | 345 |
| ttt gaa gta cct ttt gaa caa atc cag aaa gtg cag gtg gtg gta act | | | 1348 |
| Phe Glu Val Pro Phe Glu Gln Ile Gln Lys Val Gln Val Val Val Thr | | | |
| 350 | 355 | 360 | |
| gtt ttg gac tat gac aag att ggc aag aac gat gcc atc ggc aaa gtc | | | 1396 |
| Val Leu Asp Tyr Asp Lys Ile Gly Lys Asn Asp Ala Ile Gly Lys Val | | | |
| 365 | 370 | 375 | |
| ttt gtg ggc tac aac agc acc ggc gcg gag ctg cga cac tgg tca gac | | | 1444 |
| Phe Val Gly Tyr Asn Ser Thr Gly Ala Glu Leu Arg His Trp Ser Asp | | | |
| 380 | 385 | 390 | |
| atg ctg gcc aac ccc agg cga cct att gcc cag tgg cac acc ctg cag | | | 1492 |
| Met Leu Ala Asn Pro Arg Arg Pro Ile Ala Gln Trp His Thr Leu Gln | | | |
| 395 | 400 | 405 | |
| gta gag gag gaa gtt gat gcc atg ctg gcc gtc aag aag taa | | | 1534 |
| Val Glu Glu Val Asp Ala Met Leu Ala Val Lys Lys * | | | |
| 410 | 415 | 420 | |
| aggaaagaag aagcctttct gcatttgccc atatagtgct ctttagccag tatctgtaaa | | | 1594 |
| tacctcagta atatgggtcc tttcattttt ccagccatgc attcctaaca caattcagtg | | | 1654 |
| gtacttggaa tcctgtttta atttgcacaa atttaaatgt agagagcccc taagtccttc | | | 1714 |
| atcataccac tgccctccaa atctactctt ctttaagca atatgatgtg tagatagagc | | | 1774 |
| atgaatgaaa ttatttattt gatcacactg ttgtatatac cagttatgcta aagatttatt | | | 1834 |
| tctagttgt gtatttgtat gttgtaaagcg tttcctaatac tttgtatatac tagatgttt | | | 1894 |
| taataagatg ttctatTTTA aactatgtaa attgactgag atataggaga gctgataata | | | 1954 |
| tattatacgg taaatatagt atcgtctgca ttccagcaaa aatataact cgtaaggcac | | | 2014 |
| tagtacagtt aaactgacat cttaaaggac aacttaaacc tgagcttct attgaatcat | | | 2074 |
| ttgagtagcca agataaactt acaccacata cttgggggtt gaatccaatt ttgtagaatt | | | 2134 |
| cctacacagg caaaatagca tgatctgagc agcagcatcc aggtgtaccc caaggaagca | | | 2194 |
| tagccacaaa acagaatagc acctgtctgt acatatttac aaagctaaaa taatggcttc | | | 2254 |
| acttttat ttgaggaagc aactgaacag gagtcaatga tttcatatta ctgcatatag | | | 2314 |
| aataacaaca aggtgttccg tttgtgtgtg tttgtgtgtg tttgtgtgtg cacattgtt | | | 2374 |
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<212> PRT

<213> Homo sapiens

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| 20 | 25 | 30 |
|-----|-----|-----|
| Gly | Glu | Lys |
| Gly | Glu | Glu |
| Asp | Ala | Phe |
| Ser | Lys | Leu |
| Lys | Glu | Lys |
| Phe | Met | |
| 35 | 40 | 45 |
| Asn | Glu | Leu |
| His | Lys | Ile |
| Ile | Pro | Leu |
| Pro | Pro | Trp |
| Trp | Ala | Leu |
| Ala | Ile | Ile |
| Ile | Val | Ala |
| Ala | Val | Leu |
| Leu | Val | Leu |
| Thr | Cys | Cys |
| Cys | Phe | Cys |
| Ile | Cys | |
| 65 | 70 | 75 |
| 80 | | |
| Lys | Lys | Cys |
| Cys | Leu | Phe |
| Phe | Lys | Lys |
| Asn | Lys | Lys |
| Lys | Gly | Lys |
| Gly | Lys | Glu |
| Lys | | Lys |
| Gly | Gly | Asn |
| Asn | Ala | Ile |
| Ile | Asn | Met |
| Met | Lys | Asp |
| Asp | Val | Lys |
| Lys | Asp | Leu |
| Gly | Gly | Lys |
| 100 | 105 | 110 |
| Thr | Met | Lys |
| Lys | Asp | Gln |
| Gln | Ala | Leu |
| Leu | Lys | Asp |
| Asp | Asp | Ala |
| Ala | Glu | Thr |
| Thr | Gly | Gly |
| Gly | Glu | Lys |
| Glu | Glu | Pro |
| Pro | Lys | Glu |
| Glu | Glu | Glu |
| Glu | | Lys |
| 130 | 135 | 140 |
| Lys | Leu | Gln |
| Gln | Tyr | Ser |
| Ser | Leu | Asp |
| Leu | Tyr | Asp |
| Asp | Phe | Gln |
| Phe | Asn | Asn |
| Asn | Gln | Leu |
| Gln | Leu | |
| 145 | 150 | 155 |
| 160 | | |
| Val | Gly | Ile |
| Ile | Gln | Ala |
| Ala | Ala | Glu |
| Glu | Leu | Pro |
| Leu | Pro | Ala |
| Pro | Leu | Asp |
| Leu | Asp | Met |
| Asp | Gly | Gly |
| Gly | Ile | Ile |
| Ile | Gly | 165 |
| 165 | 170 | 175 |
| Thr | Ser | Asp |
| Asp | Pro | Tyr |
| Tyr | Val | Lys |
| Val | Phe | Leu |
| Phe | Leu | Leu |
| Leu | Pro | Asp |
| Pro | Lys | Lys |
| Lys | | |
| Lys | Phe | Glu |
| Glu | Thr | Lys |
| Thr | Lys | Val |
| Lys | Val | His |
| Val | Arg | Lys |
| Arg | Thr | Leu |
| Thr | Leu | Asn |
| Leu | Asn | Pro |
| Asn | Pro | Val |
| Pro | Val | Phe |
| Val | Phe | Asn |
| Phe | | |
| Glu | Gln | Phe |
| Phe | Thr | Phe |
| Thr | Lys | Val |
| Lys | Val | Pro |
| Val | Tyr | Ser |
| Tyr | Ser | Glu |
| Ser | Gly | Gly |
| Gly | Gly | Lys |
| Lys | | |
| Glu | 210 | 220 |
| Leu | Val | Met |
| Met | Ala | Val |
| Ala | Tyr | Asp |
| Tyr | Asp | Phe |
| Phe | Asp | Arg |
| Arg | Phe | Ser |
| Ser | Lys | His |
| Lys | His | Asp |
| His | Asp | Ile |
| Ile | Gly | Glu |
| Glu | Phe | Lys |
| Phe | Val | Pro |
| Val | Pro | Met |
| Met | Asn | Thr |
| Asn | Thr | Val |
| Thr | Val | Asp |
| Asp | Phe | Gly |
| Gly | His | Val |
| His | Val | |
| Ile | Gly | 245 |
| 245 | 250 | 255 |
| Thr | Glu | Glu |
| Glu | Trp | Arg |
| Trp | Arg | Asp |
| Asp | Leu | Gln |
| Leu | Gln | Ser |
| Gln | Ser | Ala |
| Ala | Glu | Lys |
| Glu | Glu | Gln |
| Gln | Glu | |
| 260 | 265 | 270 |
| Lys | Leu | Gly |
| Gly | Asp | Ile |
| Asp | Ile | Cys |
| Cys | Phe | Ser |
| Phe | Ser | Leu |
| Leu | Arg | Tyr |
| Arg | Tyr | Val |
| Tyr | Val | Pro |
| Val | Pro | Thr |
| Pro | Thr | Ala |
| Thr | Ala | Gly |
| Ala | Gly | |
| Gly | | |
| 275 | 280 | 285 |
| Lys | Leu | Thr |
| Leu | Thr | Val |
| Thr | Val | Val |
| Val | Val | Ile |
| Ile | Ile | Leu |
| Leu | Leu | Glu |
| Glu | | A |